REMARKS

Reconsideration of the application is requested.

Claims 21-39 remain in the application. Claims 21-39 are subject to examination.

Under the heading "Claim Rejections - 35 USC § 103" on pages 2-7 of the above-identified Office Action, claims 21-34 and 36-39 have been rejected as being obvious over U.S. Patent No. 6,498,418 to Rueger (hereinafter Rueger) in view of U.S. Patent No. 5,173,832 to Giorgetta et al. (hereinafter Giorgetta) and further in view of Japanese Patent disclosure JP 2002101673 to Fukagawa et al. (hereinafter Fukagawa) under 35 U.S.C. § 103.

Rueger describes a method for controlling an actuator, in which an error current measurement occurs in the actuator circuit in order to generate a diagnostic signal.

In Giorgetta, a diagnostic module 9A (see Fig. 1) measures the voltage at an actuator (load) A via a line 10A and the current through the actuator (load) A via a line 8A. In order to detect errors in the actuator circuit for the actuator A, a current measurement as well as a voltage measurement occurs. However, it is clearly noted that Giorgetta, does not teach the taking of two current measurements at two distinct points

within the circuit for error detection. An error current measurement according to the invention of the instant application is in this case not possible, since the current measurement occurs at only a single point within the actuator circuit. In other words, Giorgetta cannot teach the faults detected in the instant application as it requires two current measurements. Therefore, Applicant does not understand how Giorgetta can teach anything about fault detection in Rueger as they teach distinctly different testing methodologies.

Fukagawa describes a circuit configuration for controlling a piezoelectric actuator, in which influences of the ambient temperature are to be compensated for by a highly accurate supply (allotment) of energy.

What is disadvantageous in the known monitoring method according to Rueger, is the fact that no differentiation between a battery short circuit and an earth short circuit is possible.

The invention of the instant application is therefore based on the object of improving the known monitoring method in Rueger in that a differentiation between a battery short circuit and an earth short circuit is rendered possible.

The object is achieved, in accordance with the invention of the instant application, in that a diagnostic signal with three different values is determined in dependence upon the comparison of the currents measured in the actuator circuit during an error current determination stage.

Rueger considered singly does not render obvious the subject matter of the invention since this reference does not contain an incentive as to how three error states (an earth short circuit, a voltage short circuit and an error-free state) can be differentiated in an error current measurement.

Even a combination of Rueger with the remaining references does not lead to the solution according to the invention, since these references are of a different genre, and only suggest one current or voltage measurement at a single measuring point within the actuator circuit. Furthermore, none of these references suggest a monitoring method, which render possible an error current measurement with a differentiation between three different error states.

Claim 21 of the instant application recites "generating a diagnostic signal in dependence on the voltage in the actuator circuit, the diagnostic signal assuming any of at least three mutually different values respectively indicating a ground short circuit, a short circuit to a supply voltage, or an

error-free state in dependence on an outcome of the comparing step". As the Examiner states, Rueger does not teach this step. As Giorgetta only teaches one current measuring step, Giorgetta cannot teach this feature alone or in combination with Rueger.

Claim 29 of the instant application recites "a comparator unit ... being configured to effect a comparison between the first and second electrical currents, and to generate a diagnostic signal in dependence on the comparison and in dependence on the electrical voltage measured by said third measuring device, the diagnostic signal taking on one of at least three different values depending on the comparison between the measured currents, in order to distinguish between a ground short circuit, a short circuit to a supply voltage, and an error-free state, respectively". As the Examiner states, Rueger does not teach the feature of "the diagnostic signal taking on one of at least three different values depending on **the comparison between the measured currents**, in order to distinguish between a ground short circuit, a short circuit to a supply voltage, and an error-free state". As Giorgetta only teaches one current measurement, Giorgetta cannot teach this feature alone or in combination with Rueger as there is no hint or suggestion to use two current measurements for determining the faults.

It is accordingly believed to be clear that none of the references, whether taken alone or in any combination, either show or suggest the features of claims 21 and 29. Claims 21 and 29 are, therefore, believed to be patentable over the art. The dependent claims are believed to be patentable as well because they all are ultimately dependent on claims 21 and 29.

Finally, applicants appreciatively acknowledge the Examiner's statement that claims 34-35 "would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims." In light of the above, applicants respectfully believe that rewriting of claims 34-35 is unnecessary at this time.

In view of the foregoing, reconsideration and allowance of claims 21-39 are solicited.

If an extension of time is required, petition for extension is herewith made. Any extension fee associated therewith should be charged to the Deposit Account of Lerner Greenberg Stemer, LLP, No. 12-1099.

Please charge any other fees that might be due with respect to Sections 1.16 and 1.17 to the Deposit Account of Lerner

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Respectfully submitted,

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